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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/650,726	08/30/2000	Denis Miglianico	Q60462	1213

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EXAMINER

ROSALES HANNER, MORELLA I

ART UNIT	PAPER NUMBER
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2128

DATE MAILED: 03/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/650,726

Applicant(s)

DENIS MIGLIANICO

Examiner

Morella I Rosales-Hanner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 11 is/are rejected.
- 7) ☒ Claim(s) 5 - 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 20 August 2000 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/650,726.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Detailed Action

1. Claims 1 – 11 are pending and have been examined.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on August 30th, 2000 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner is considering the information disclosure statement.

Priority

3. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/650,726, filed on August 30th, 2000.

Specification

4. The specification is objected to for the for the following reasons: it appears to be a literal translation into English from a foreign document and contains grammatical and idiomatic errors. For example, line 15 of page 5 recites: "...Circuit (s) is /are ..." is improper. The specification is replete with such deficiencies.

Claim Objections

5. **Claim 5** is objected to because of the following informalities: the claim appears to be missing the word "An" at the beginning of the claim. Appropriate correction is required.
6. **Claims 1 - 11** are objected to because they do not conform to standard U.S. practice. For example, the preamble should be separated from the claims.
7. **Claim 6** is objected to because of the following informality: the word least appears to be misspelled in **line 2**, the claim recites: "... at lest". Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
- 8.1 **Claims 1 - 11** are rejected under U.S.C. 112, second paragraph, for the following reason, the claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. For example, claim 1 [line 7] recites: "... **therefrom** in response **thereto** ..." this appears to be a literal translation into English from a foreign language. All claims are replete with these

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deficiencies. Applicant is required to amend accordingly or take other appropriate steps to correct the deficiencies.

8.2 Claim 4 is rejected under U.S.C. 112, second paragraph, for the following reason: claims 1 and 5 use the transitional phrase "consisting" which excludes any element, step, or ingredient not specified in the claims. *In re Gray*, 53 F.2d 520, 11 USPQ 255 (CCPA 1931). See MPEP § 2111.03. Thus, dependent claims that attend to add elements are indefinite.

8.3 Claims 1 - 11 are rejected under U.S.C. 112, second paragraph, for the following reason: the term "suitable" in **claim 1** is a term which renders the claim indefinite. The term "suitable" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The term 'unit' has been rendered indefinite by the use of the term 'suitable'. All claims are replete with these deficiencies. Applicant is required to amend accordingly or take other appropriate steps to correct the deficiencies.

8.4 Claims 1 - 11 are rejected under U.S.C. 112, second paragraph, for the following reasons the claims mix statutory classes. For example, **claims 1** is a method claim that appears to contain a nested "**apparatus**" claim within the preamble of the claim. Such claim structure involves analysis as per *Ex parte Lyell*, 17 USPQ2d 1548 (Bd. Pat. App.

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& Inter. 1990), a claim directed to an automatic transmission workstand and the method steps of using it was held to be ambiguous and properly rejected under 35 U.S.C. 112, second paragraph. All claims are replete with these deficiencies. Applicant is required to amend accordingly or take other appropriate steps to correct the deficiencies.

Claim Interpretation

9. There are numerous defects with the claims including 112 2nd paragraph issues, thus making it difficult to examine the claims. In re Steele, 305 F.2d 859, 134 USPQ 292 (CCPA 1962) (it is improper to rely on speculative assumptions regarding meaning of a claim and then base a rejection under 35 U.S.C. 103 on these assumptions). See MPEP § 2143.03. However, in the interest of compact examination, the claims will be examined to the best extent possible.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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10.1 Claims 1 – 7 and 9 - 11 are rejected under 35 U.S.C. 102(b) as being anticipated by **US Patent No. 4,777,618** issued to Nakano et al., hereafter referred to as *Nakano*.

10.1.1 As regard to **independent claims 1, 5 and 11**, *Nakano* teaches [Fig. 5 and accompany text] an apparatus and a method, use for testing the operation of an electronic unit by simulation, as claimed in claim 11, comprising:

- processing some of the output signals from said unit as they are issued by means of at least one programmable logic circuit , as claimed by the applicant in claims 1 and 5;
- storing values of parameters corresponding to said processed signals as claimed by the applicant in claims 1 and 5; and
- causing said microprocessor to access said stored parameter values at a frequency that is compatible with its own operating frequency, as claimed by the applicant in claim 1.

10.1.2 As regard to **dependent claims 2 and 3**, *Nakano* teaches [Col 8, line 51 – Col 9, line 2] parameter values that are representative of switching instants of logic signals generated an electronic unit, of the duration which a logic value has a predetermined value or mean value of a logic variable over a predetermined time.

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10.1.3 As regard to **dependent claims 4**, *Nakano* teaches [Col 4, lines 60 - 68] sending at least some of the signals generated by a microprocessor in the simulator onto at least one second programmable logic circuit and in sending simulation signals to the electronic unit while the microprocessor is nit in communication with the electronic unit.

10.1.4 As regard to **dependent claim 6**, *Nakano* teaches [Col 6, lines 3 – 24] a simulator further comprising at least one second programmable logic circuit suitable, in real time, for sending simulation signals to said unit on the basis of reference signals previously issued.

10.1.5 As regard to **dependent claim 7**, *Nakano* teaches [Fig. 5, element 40] an input-output interface circuit, for receiving output signals and for sending simulation signals, implemented as a single electronic circuit.

10.1.6 As regard to **dependent claim 9**, *Nakano* teaches [Col 5, line 29 – Col 6 line 9] A/D converting means for converting an analogue signal into a digital signal.

10.1.6 As regard to **dependent claim 10**, *Nakano* teaches [Fig 5 and accompanied text] an apparatus programmed to have simulation function for reproducing actual signals of the engine to reproduce troubles of rare occurrence.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11.1 **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over **US Patent No. 4,777,618** issued to Nakano et al., hereafter referred to as *Nakano* as applied to claim 5 above, and further in view of a printed publication by Herbert Hanselmann, titled "**Hardware-in-the-Loop Simulation Testing and its Integration into a CACSD Toolset**", 1998 IEEE International Symposium on Computer-Aided Control System Design, hereafter referred to as *Hanselmann*.

Nakano teaches [Fig. 5, element 40] an input-output interface circuit, for receiving output signals and for sending simulation signals, implemented as a single electronic circuit.

Nakano doesn't expressively teach that the input-output interface circuit, for receiving output signals and for sending simulation signals, implemented as a single electronic circuit is of the field programmable gate array type.

Hanselmann teaches [table 1] the use of programmable gate array to improve processor performance. *Hanselmann* also teaches [Pg. 152, paragraph] that this type of devices are used for implementing simulation applications that has become a standard option for speeding up the development and quality assurance of electronic control units.

It would have been obvious to one of ordinary skills in the art, at the time of the invention, to implement the input-output interface circuit disclosed by Nakano in a field programmable gate array device in order to speed up the development and quality assurance of electronic control units.

Conclusion

12. The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- US Patent No. 4, 385,278 issued to Thomas B. Sterling
- US Patent No. 5,808,921 issued to Gold et al.
- US Patent No. 5,954,782 issued to Kazuhide Togai

Response Guidelines

13. A shortened statutory period for reply to this office action is set to expire **3 (three) months and 0 (zero) days** from the mailing date of this action. In the event a first reply is filed within **2 (two) months** of the mailing date of this action and the advisory action

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is not mailed until after the end of the **3 (three) months** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this action.

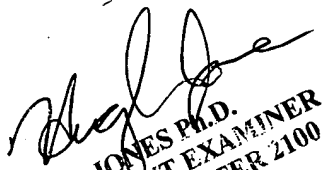
Any inquiry concerning this communication or earlier communication from the examiner should be directed to Morella Rosales-Hanner whose telephone number is (703) 305-8883. The examiner can normally be reached Monday-Friday from 7:00 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Teska can be reached on 703 305-9704. The fax number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

MRH

Mar. 05, 2004


HUGH JONES Ph.D.
PRIMARY PATENT EXAMINER
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